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ABSTRACT

The purpose of the study was to develop a course-evaluation form for the assessment of student-centered courses. The development of the instrument was derived from theoretical views of student courses which suggested five dimensions. The dimensions included bases of power, positive classroom environment, personal meaningfulness, student self-evaluation and personal responsibility for learning, and commitment or personal involvement. Items were written for each dimension. The 25 item instrument was administered to 321 graduate and undergraduate students. A factor analysis resulted in five factors: 1 - personal meaningfulness; 2 - classroom environment involving interaction of teacher, group and individual; 3 - diffusion of power or influence; 4 - self-evaluation and responsibility for learning; 5 - coercive power. The results tended to support the original factor structure with personal meaningfulness as the overriding factor. It was concluded that the instrument can be refined to provide a reliable and valid alternative method for teachers with student-centered course objectives. (Author)

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by

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## ABSTRACT

The purpose of the study was to develop a course-evaluation form for the assessment of student-centered courses. The development of the instrument was derived from theoretical views of student-centered courses which suggested five dimensions. The dimensions included bases of power, positive classroom environment, personal meaningfulness, student self-evaluation and personal responsibility for learning, and commitment or personal involvement. Items were written for each dimension. The 25 item instrument was administered to 321 graduate and undergraduate students. A factor analysis resulted in five factors: I - personal meaningfulness; II - classroom environment involving interaction of teacher, group and individual; III - diffusion of power or influence; IV - self-evaluation and responsibility for learning; V - coercive power. The results tended to support the original factor structure with personal meaningfulness as the overriding factor. It was concluded that the instrument can be refined to provide a reliable and valid alternative method for teachers with student-centered course objectives.

# Evidence for a Student-Centered Course Evaluation Form

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A recent trend in education emphasizes the role of the learner as an active autonomous learner rather than a passive receiver of information. Rogers (1969), Foster and Alderman (1974), and Pine (1974), suggest that the transition could be characterized as one from teacher-centered to student-centered. The movement to student-centered courses is accompanied by a shift in the role of the teacher from instructor-evaluator to facilitator. The facilitator acts as a supportive guide or resource person for students setting their own learning goal, whereas the traditional instructor-evaluator presents information and then evaluates students on whether or not they have met the instructor's goals. Additionally, the student-centered course approach assumes that the student will be able to make personal existential meaning of his learning experiences in such a way as to assist him in his personal growth and development.

Teachers or facilitators attempting to conduct student-centered courses are presented an anomaly in that current course evaluation forms are predominantly teacher-centered in that they tend to focus on teacher-performance and not the student's perception of his own performance in the context of the course. Hence, the accountability scheme of teacher-centered evaluation tends to be one-sided in generally assuming the teacher to be responsible for the student's learning and growth. Such evaluation tends to neglect to account for

the learner as one who attributes personal meaning to information and experiences through the quality of his perceptions and the strength of his identity and life experiences.

There are two major problems which current course evaluation forms present for teachers teaching student-centered courses. The first is that the inclusion and interpretation of items appear to be designed for evaluation of teacher-centered courses. For example, "The course objectives were not clearly stated" is a vice in a teacher-centered course, while a virtue in a student-centered course where course objectives are personal in nature and can not be clearly stated by the teacher.

A second disadvantage with using most course evaluation forms in student-centered classes is that the forms are directed to the evaluation of the instructor and the content with little or no attention directed to the student's evaluation of his own experience and performance. Generally, too, there are a number of items which depersonalize the individual learner's experiences through objectivication of the subjective state of the experience. For example, while an item of evaluation such as "It was quite interesting" when written "I was quite interested" or "I perceived the course to be quite interesting" may measure the same thing, the latter two forms permit the learner to retain personal ownership of his experience and to heighten his awareness of this fact.

The purpose of this study, then, given the foregoing concerns was to develop and analyze a student-centered course evaluation form with the underlying theme being student perception of personal meaning and growth in the course.

There have been other attempts to develop a student-centered course evaluation form. Costin (1971) developed an evaluation form based on styles of leadership, "authoritarian" versus "democratic" or "directive" versus "nondirective". Costin's study resulted in four distinct factors: (a) student involvement (b) teacher support (c) negative support (d) teacher control. The first two factors were considered to be student-centered, while the latter two were labeled teacher-centered. The items in Costin's evaluation form focused primarily on overt teacher and student behavior (i.e. "students talked more than the teacher").

Hartley and Hogan (1972) focused on student-centered outcomes as opposed to the process of education. Two instruments were used for evaluation of courses, a traditional, teacher-centered instrument and a scale of 26 items focusing on student ratings of development during the span of the course. A factor analysis resulted in two scales. One composed of factors by items in the teacher-centered instrument, one defined by items on the student-centered scale. Hartley and Hogan concluded that most current course evaluation forms restrict course evaluation to traditional conceptions of teacher performance. They also conclude that students do think different courses have different effects on their growth and development and that this should be considered in an course evaluation.

In the present study, a literature review pertaining to the psychology of student-centered education was conducted to aid the identification of important theoretical aspects of student-centered courses. Five dimensions including power (French & Raven, 1959), classroom environment (Schmuck & Schmuck, 1971), personal meaningfulness (Ausubel & Robinson, 1969), self-evaluation and responsibility for learning

(Rogers, 1969), and commitment (Koch, 1956) were identified to be critical, psychologically-oriented aspects of student-centered instruction.

Item Development

Items were constructed for each of the five dimensions suggested by theoretical concerns. The dimension of power was viewed in terms of the bases of influence developed by French and Raven (1959) and authority by Arieti (1973). Power for French and Raven is seen in terms of influence, and influence in terms of psychological change. From this consideration of influence, they arrive at five elements which comprise power.

Reward power is essentially the student's perception that the teacher can mediate rewards for him. In constructing this item, it was assumed that the acquisition of a "good" grade in the course would be an obvious reward, more so than something like praise. Therefore, it was assumed that the item "I felt that if I agreed with the instructor, it would help my grade" would provide for an indicator of reward power.

Coercive power is based on the student's perception that the teacher can mediate punishment for him. It was assumed that the acquisition of a bad grade would most obviously define the student's perception of coercive power, hence, this element was operationally defined by the item "I felt that if I disagreed with the instructor, it would hurt my grade."

Legitimate power is founded on the student's perception that the teacher has a legitimate right to prescribe behavior for him. Legitimate power is inherent in the classroom system in that the teacher has

been hired by the college because of his appropriate credentials. This element was operationally defined by the item, "I feel that the instructor has a right to his/her professional status and position."

Referent power is founded on the student's identification with the teacher. The item "I identified with and/or felt close to the instructor" operationally defines this element.

Expert power is based on the student's perception that the teacher has some special knowledge or expertness. Two items were selected to define this element. The actual presence of some special knowledge or expertness was looked at with the item "I believe that the instructor knows his/her subject well." A second component of expert power was viewed in terms of Arieti's (1973) conception of the authoritative use of authority. Arieti contends that an authoritative authority relays information and permits the recipient of that information to make their personal decisions on how to view that information free of coercion. Using Arieti's perspective, the item "The instructor presented information and left it up to me to decide whether or not it was valid" was written.

Research has tended to support the assumption that teachers perceived to be operating on powers other than that of coercion would tend to have more student-centered courses. (Schmuck and Schmuck, 1971). The use of coercion would tend to move the course in a direction of authoritarian control which would negate the possibilities for student-centered activities.

Characteristics of a positive classroom environment suggested by Schmuck and Schmuck (1971) served as the rationale for constructing items on the second dimension. A positive classroom climate, according

to Schmuck and Schmuck, is one where students are viewed as influencing the teacher as well as one another; where students are supportive of each other while striving to maximize individual differences; where communication is relatively open and featured by dialogue and where there is high attraction between group members and high attraction for the group as a whole. Additionally such an environment finds the students reflecting upon the development of the group as an object of study in itself.

From Schmuck and Schmuck's description of a positive classroom environment, the following items were developed to represent the desired climate of the student-centered classroom. Student agreement with them would then point the class in the direction of student-centered.

"I was influenced by other students."

"I influenced other students."

"The students could influence the teacher."

"The students sensed a high level of belonging to the group as a whole, as well as an attraction between classmates."

"Students were viewed as individuals by other students and the instructor."

"Communication was an open and ongoing dialogue."

"The processes of working and developing together as a group were considered relevant in themselves for study."

"The students were generally supportive in working with each other."

Additionally an item regarding the presence of humor in the classroom was added under the assumption that healthy humor is a part of the positive classroom environment. Freud (1916) pointed to the tension-reducing aspect of humor in situations where status-role differences

appear (i.e. teacher-student). "A healthy sense of humor pervaded the classroom atmosphere" defined this aspect.

The third dimension of personal meaningfulness was emphasized by Ausubel and Robinson (1969) who distinguish between logically and personally meaningful learning. The importance of personally meaningful learning is that it finds anchorage in previously learned materials and experiences. The student incorporates new information from his personal, present frame of reference. Student-centered teaching is assumed to be directed toward personally meaningful learning in that the learner chooses personally relevant information to study and items were constructed to measure the degree of personal meaningfulness.

"This course was personally meaningful to me."

I found myself thinking about the problems raised by this course."

"The material this course was centered around was personally meaningful to me."

"I feel that I have grown personally in the course."

The theoretical rationale underlying these four items is that if students are permitted to deal with personally meaningful problems and materials, they will find the course to be personally meaningful to them and that they will have a sense of personal growth in the course.

Student self-evaluation and personal responsibility for learning as discussed by Rogers (1969) are considered as crucial elements for a student-centered course. When responsibility for learning and evaluation reside with the teacher the course tends to become teacher-centered. The following items were included to evaluate whether students perceived themselves as responsible for their own learning and self-evaluation.

(self-evaluation) "I was able to achieve the goals I set up for myself."

(self-evaluation) "I set up my own criteria for evaluating my learning."

(responsibility) "I set up my goals in this course."

(responsibility) "I felt personally responsible for my own learning."

The fifth dimension considered important for a student-centered course is the student's commitment or personal involvement in the course. This dimension might be described as akin to Koch's (1956) description of State B in which he says "you do not merely 'work at' or 'on' the task; you are the task or vice versa" (p.62). The assumption was made that if the course was student-centered, students would become deeply involved in their work to the point of seeking additional information beyond the time limits of the course due to the personal meaningfulness of their involvements. The items "I will continue my studies in this area" and "There were times when this course became a part of me" represent this dimension.

## Method

### Sample

The 25 item student-centered course evaluation instrument (Appendix I) was administered to 321 graduate and undergraduate students attending 17 courses (4 undergraduate, 13 graduate) during the spring and summer sessions of 1974. Fifteen courses were in the College of Education, while two courses were in the Foreign Languages Department.

### Administration

Individual instructors administered the form during the last week of classes in the spring and summer sessions of 1974. Students were

instructed to mark a response to each item next to the appropriate number on an attached answer sheet. Students were asked to either strongly agree, agree, disagree or strongly disagree to each of the questions.

## Results and Discussion

Reliability was initially evaluated for stability and internal consistency. Test-retest reliability was computed for a sample of 48 students over a 12 day period yielding a coefficient of .86 (Bell, 1975). For a sample of 321 students the internal consistency reliability was .88. While high internal consistency appears to contradict the presence of five factors, the consistency may be attributed to a general factor which is measured by the instrument. These results demonstrate that a high proportion of the total variance is reliable variance.

An alpha factor analysis using a varimax rotation was computed to test the existence of the hypothesized factors. Five factors, as hypothesized, were extracted and accounted for 40% of the total variance.

Table 1 shows the five factors along with the items defining each. Each variable (item) is presented with its respective factor loading. Loadings of .40 and above were reported.

Table 1

Table 1. Item Number, Factor Loading, and an Abbreviated Description of Items (Variables) Defining Five Factors of Student Responses to Courses.

| Factor | Item No. | Load | Description |
|---|---|---|---|
| I | 6 | .74 | Course personally meaningful |
| | 7 | .64 | I think about course problems |
| | 11 | .63 | Material personally meaningful to me |
| | 15 | .63 | I have grown personally |
| | 24 | .58 | Course a part of me |
| | 17 | .49 | Will continue studies in area |
| | 25 | .42 | I can decide information valid |
| II | 23 | .59 | Sense of humor |
| | 14 | .57 | High level of belonging |
| | 3 | .53 | Identified with instructor |
| | 1 | .51 | Communication open dialogue |
| | 5 | .50 | Students viewed as individuals |
| | 4 | .49 | Instructor right to status |
| | 20 | .44 | Process of working/developing as group |
| | 2 | .41 | Able to achieve my own goals |
| III | 12 | .62 | Influenced by students |
| | 10 | .60 | Influenced students |
| | 13 | .49 | Students influence teacher |
| IV | 18 | .66 | My own evaluation criteria |
| | 16 | .64 | Set own goals |
| V | 9 | .75 | Disagree with instructor |

Factor I can be defined as personal meaningfulness. Items with the highest correlation on Factor I are concerned with student's personal growth and the meaningfulness of course content. The factor combines the items that were originally the dimensions of personal meaningfulness, commitment and the authoritative component of the expert power element of the power dimension. This suggests that personal meaningfulness, in this larger sense, refers to both in-depth involvement during the span of the course as well as a continuing involvement which transcends the limits of the course. Additionally, the items on expert power may indicate that when students are given permission to make personal meaning of information through their validation of information, the information then becomes personally meaningful.

Factor II appears to most closely represent the dimension identified as classroom environment. A positive classroom environment appears to be dependent upon the interaction of the teacher, the group, and the individual. This factor seems to describe how a group functions as well as the students'feeling that they are viewed as individuals. It seems consistent that in such an environment the facilitator is seen to possess both referent and legitimate power.

Factor III can be labeled as the diffusion of power. This factor may indicate the degree to which power centered on the teacher or was diffused among class members. All items in this factor were derived from the dimension referred to as classroom environment.

Factor IV may be designated as self-evaluation and responsibility for learning. Two of the four items constructed to measure this dimension loaded on this factor. The items represented personal responsibility both for self-evaluation and goal setting. The fact that

these two items loaded together gives some support to this dimension.

Factor V may be called coercive power. The coercive power element of the power dimension as measured by one item was the only item to load on the fifth factor. This represents the student's perception that the instructor can mediate punishment for him.

The research represents a beginning attempt to move from theoretical considerations perceived to be prominent in the evaluation of student-centered courses to the construction of a student-centered course evaluation form for practical use. Overall, the factor analysis tends to lend support to the construct validity of the student-centered evaluation instrument. The originally hypothesized factors were apparent as the items tended to load and group on expected factors, in particular the dimension of personal meaningfulness. Additional items need to be written so as to refine the theoretical dimensions under consideration, specifically in the case of four items which failed to load on any of the five factors. Also, new dimensions need to be uncovered, such as hypothesizing that more than one distinct dimension exists for the classroom climate and the power dimensions. The initial results do provide the encouragement necessary to expend additional time and energy to achieve the desired goal of perfecting an evaluation instrument suitable for student-centered courses.

The further development of this instrument represents a move in the direction of expanding teaching accountability to include students as active developing learners whose personal growth is effected by their course experiences. Hopefully, the instrument will eventually offer a reliable and valid alternative method of evaluation for teachers with non-traditional student-centered course objectives.

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